

REMARKS

Reconsideration and withdrawal of the objections and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1-16 and 18-24 are now pending in the application, with Claims 1, 10, 13 and 18-21 being independent. Claim 17 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Claims 1, 4, 10-13, 16, 18-22 and 24 have been amended herein.

The application was objected to because of an inadvertent hand-written notation to Claim 24 that was included in the copy of the application papers filed June 22, 2004. (The original papers were filed on April 16, 2004, and did not include any hand-written notations.) This objection was discussed with the Examiner in a telephonic interview on October 6, 2005. During that interview, it was agreed to amend Claim 24 to include the hand-written alterations and that there would be no need for a Supplemental Declaration. Claim 24 has been amended herein generally along the lines discussed during the interview. However, rather than recite that the claim was dependent upon “any one of claims 21 to 23,” the claim has been amended to depend on either of Claim 22 or 23. This was done because “the predetermined value” in Claim 24 finds clear antecedent basis only in Claims 22 and 23, not Claim 21. It is believed that these changes comply with the spirit

of the discussion during the interview. Reconsideration and withdrawal of the objection to the application are requested.

Applicant notes with appreciation the indication that Claims 5, 14, 18 and 19 have been indicated as reciting allowable subject matter. In that regard, Claims 18 and 19 have been amended herein in independent form, and independent Claim 17 has been cancelled. Claims 18 and 19 are believed to be in condition for allowance.

Claim 19 was also objected to for a minor informality. Claim 19 has been further amended herein to delete the term "when". Reconsideration and withdrawal to the objection to Claim 19 are respectfully requested.

Claims 1-3, 10, 15-17 and 20-24 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,231,156 (Ono). Claims 4, 6, 7 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over Ono in view of U.S. Patent No. 6,382,764 (Shimoda). Claims 8 and 9 were rejected under § 103 as being unpatentable over Ono in view of U.S. Patent No. 5,583,547 (Gast et al.). These rejections are respectfully traversed.

Ono relates to an ink jet printing apparatus and its printing head ejection recovery method. The apparatus includes a carriage 2 on which several printing heads for ejecting color inks 1k-1y are mounted. Also mounted thereon is printing head 1s for ejecting a processing liquid. The printing heads are aligned such that their nozzle arrays are parallel to one another as shown in Figure 1A. Although the different nozzles can be

formed in separate heads as shown or divided into sections of nozzles, the separate color inks and processing liquid would still be in parallel, side-by-side arrays. In order to determine when to perform the recovery process in Ono, the number of times of ink ejection is counted for the printing heads of each ink. Threshold values are set depending upon the distance that a particular printing head is from the processing liquid head or depending upon the kind of ink to be ejected. When the counted values of the printing heads of the respective inks exceed the corresponding threshold value, the recovery process is performed.

However, Ono does not disclose or suggest dividing the nozzles into a plurality of blocks with the nozzles divided into the plurality of blocks forming a nozzle array, as is recited in independent Claims 1, 10, 13 and 20. That is, in Ono, even if the arrayed nozzles for each color are considered to be blocks, it cannot be said that the nozzles divided into the plurality of blocks form any nozzle array. Further, Ono does not disclose or suggest that determining whether or not to execute a recovery operation is based on an accumulated number of ejections from predetermined nozzles in a printhead, with the predetermined nozzles being a portion of the plurality of nozzles forming a nozzle array, as is recited in independent Claim 21.

Thus, Ono fails to disclose or suggest important features of the present invention recited in independent Claims 1, 10, 13, 20 and 21.

Shimoda describes a printing apparatus and method in which the total number of printing dots is compared with a predetermined threshold value in order to determine whether to perform a recovery suction. A weighting coefficient can be applied to a number of printing dots depending on the measured temperature. However, Shimoda is not believed to remedy the deficiencies of Ono noted above with respect to the rejected independent claims.

Gast et al. was cited for teaching a recovery operation that includes spitting all nozzles. However, Gast et al. is not believed to remedy the deficiencies of the citations noted above with respect to the independent claims.

Thus, independent Claims 1, 10, 13, 20 and 21 are patentable over the citations of record. Reconsideration and withdrawal of the §§ 102 and 103 rejections are respectfully requested.

For the foregoing reasons, Applicant respectfully submits that, in addition to Claims 18 and 19, the present invention is patentably defined by independent Claims 1, 10, 13, 20 and 21. Dependent Claims 2-9, 11, 12, 14-16 and 22-24 are also allowable, in their own right, for defining features of the present invention in addition to those recited in their respective independent claims. Individual consideration of the dependent claims is requested.

Applicant submits that the present application is in condition for allowance.

Favorable reconsideration, withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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